Novell
Open Enterprise Server

Beta

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INSTALLATION QUICK START

Welcome to Open Enterprise Server

This Quick Start provides basic information to help you become familiar with Novell® Open Enterprise Server (OES), make the necessary preinstallation planning decisions, and set up a new server to run OES services.

Becoming Familiar with Open Enterprise Server

Novell Open Enterprise Server combines NetWare®, the trusted leader for secure networking services, and SUSE LINUX, a leading open platform for delivering business-level applications. OES includes advanced services from Novell including identity management and directory services, enterprise-ready file and print services, collaboration services, Web and application services, and administration services. Common management utilities enable you to manage both platforms using the same tools.

With OES, Novell gives you the flexibility to deploy these enterprise-ready workgroup services on the NetWare 6.5 and SUSE LINUX Enterprise Server 9 (SLES 9) platforms. You can select the platform mix that is best suited to your needs. OES also provides interoperability and coexistence between existing NetWare, Linux*, and Windows* networking environments, so you can keep your current network fully operational as you deploy OES. Novell offers server migration and consolidation tools to assist you in moving valuable data from older server hardware to new OES servers.

For more general product information, see the OES product Web page (http://www.novell.com/products/openenterpriseserver).

If you want to install a basic OES server and become familiar with the available services in a test environment, see the *OES Lab Guide* (not available in this beta release).

The current (beta) documentation for OES is available on the Novell Documentation Web site (http://www.novell.com/documentation/oes).

For information about known issues and interoperability with other Novell products, see the *OES Readme* included with the beta documentation.

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Planning Your OES Deployment

The basic decisions you will need to make before installing OES are outlined below.

For detailed help in planning your OES deployment, see the *OES Planning and Implementation Guide* (not available in this beta release).

For information about coexistence of OES servers with existing NetWare and Linux networks, as well as issues involved in migrating to OES from your current network environment, see the *OES Coexistence and Migration Guide* (not available in this beta release).

DETERMINE WHAT SERVICES TO INSTALL

Novell networking services delivered as part of OES include the following:

- Directory services and identity management including Novell eDirectory™ and Identity Manager™
- File services including Novell Storage Services™ (NSS) and Novell iFolder®
- Print services including Novell iPrint
- Collaboration services including Virtual Office
- Open source services including Apache, Tomcat, MySQL*, and PHP/Perl
- Software distribution and management including ZENworks® and RPM
- Management consoles and interfaces common to all services through Novell iManager

The services you choose to install will depend largely on the intended purpose of your OES server. To simplify the process of installing special-purpose servers, Novell provides a patterned deployment feature. For example, if you want to install an OES server with all of the components necessary to support a Web-based, user-configurable collaboration environment, you simply select the Virtual Office Server pattern during the OES installation.

Novell recommends that you choose a pattern installation if one exists for the intended purpose of your server. Options are also provided to install basic and customized OES servers.

CHOOSE A SERVER PLATFORM

OES is designed to provide file and print, identity management, collaboration, and management services for workgroups within a distributed enterprise. It combines the strengths of NetWare with the strengths of SUSE LINUX to create a flexible operating system layer, giving you the option of deploying NetWare 6.5 servers, SUSE LINUX servers, or a combination of both.

Because the bulk of the services available in OES are cross platform, you are free to choose either server operating system to host the networking services you want to provide to your users. Your choice will most likely depend on a number of factors:

- **Platform Strengths:** NetWare 6.5 is the latest version of the venerable Novell network-optimized operating system. It has proven itself to be a reliable, scalable, secure foundation for hosting myriad services that increase network availability, optimize manageability, and enhance user productivity. With the inclusion of the Apache Web Server, Tomcat Sevlet Container, MySQL, and other components, NetWare 6.5 can easily run open source software. NetWare excels when the user population and management burden is highly distributed.

  SUSE LINUX Enterprise Server 9 provides a flexible and versatile operating environment for mission-critical applications and network services. It is well suited as an application server for running Linux-based solutions and as an open source platform for running the thousands of programs available from the open source community. SUSE LINUX Enterprise Server has demonstrated the ability to host a wide range of solutions including basic file and print servers, Web servers, Web content filters and proxy servers, and mail servers.

- **Familiarity:** With OES, organizations that are familiar with a particular server platform can continue to use the installation, configuration, and management tools they are accustomed to. NetWare administrators can comfortably embrace OES with the same support infrastructure and minimal need for retraining. Linux customers can invest in OES to reap the benefits of running advanced Novell networking services in a familiar environment, without having to learn about NetWare.

- **Experimentation:** OES provides an ideal opportunity for those who want to evaluate new server platforms and services. For NetWare customers, OES introduces Linux to the network environment and lays a foundation for future Linux-based and open source initiatives. For Linux customers, OES provides advanced networking services that are generally not available from the open source community or which have no open source equivalent.

- **Future Software Direction:** Due to increasing licensing fees and overall operating costs for proprietary software, many organizations are moving to open source software. OES allows such organizations to migrate existing data and services to the Linux platform to fully leverage the benefits of open source offerings.

INSTALL A NEW SERVER OR UPGRADE AN EXISTING SERVER

This *Installation Quick Start* provides abbreviated instructions for new OES server installations. For complete instructions, see the OES installation manual for your chosen server platform:

- *OES for Linux Installation Guide*
- *OES 1.0 for NetWare Installation Guide*

If you are upgrading an existing NetWare server to OES, see Chapter 3 of the *OES for NetWare Installation Guide* for complete instructions.

At this time, no mechanism is available for directly upgrading an existing Linux server to OES.

PLAN YOUR EDIRECTORY TREE

If you are creating a new eDirectory tree on your network, you must do some additional planning before you install the first server into the tree. The first server is important for two reasons: first, you create the basic structure of the tree during the server installation; second, this server will permanently host the Certificate Authority for your organization.

To ensure that your eDirectory tree meets your needs, take time to plan the following:

- **Structure of the eDirectory tree.** A well designed tree provides containers for servers, users, printers, etc. It is also optimized for efficient data transfer between geographically dispersed locations.
- **Time synchronization.** eDirectory requires that all OES servers, both NetWare and Linux, be time synchronized. By default, the OES for NetWare installation synchronizes time automatically. OES for Linux servers must be synchronized manually and configured to use Network Time Protocol (NTP).
- **Partitions and replicas.** eDirectory allows the tree to be partitioned for scalability. Replicas (copies) of the partitions provide fault tolerance within the tree. The first three servers installed into an eDirectory tree automatically receive replicas of the tree’s root partition. You might want to create additional partitions and replicas.

For information on these eDirectory planning tasks, see the *Novell eDirectory 8.7.3 Administration Guide*.

Installing OES for Linux

For this release, there are several installation options:

- Installing OES for Linux and SUSE SLES 9 for x86 SP1 on a clean box
- Updating a SUSE SLES 9 box to an OES for Linux and SUSE SLES 9 for x86 SP1 box
- Installing additional OES components on a SUSE SLES 9 for x86 SP1 box
- Installing Linux with EVMS as the Volume Manager
- Updating OES for Linux using a Red Carpet Channel

SLES 9 for x86 SP1 includes the OES for Linux components. When you install your SLES 9 server, you can install and configure the OES for Linux components at the same time.

The basic steps for installing OES with SLES 9 for x86 SP1 on a clean box are outlined below. For complete instructions, see the *OES for Linux Installation Guide* (http://www.novell.com/documentation/oes/install_linux/data/front.html).

MEETING INSTALLATION REQUIREMENTS

Prior to installing OES for Linux, ensure that your system meets the following requirements.

System Component	**Minimum Requirements**	**Recommended Requirements**
Computer	Server-class computer with Pentium* II or AMD* K7 450 MHz processor	Server-class computer with Pentium III, Pentium III Xeon*, Pentium 4, or Intel* Xeon 700 MHz or higher processor
Memory	512 MB of RAM	1 GB of RAM
Free Disk Space	2 GB of available, unpartitioned disk space	4 GB of available, unpartitioned disk space. Additional disk space may be required depending on which OES components are selected and how they are used.

Linux requires several disk partitions on the server. See the *OES for Linux Installation Guide* (http://www.novell.com/documentation/oes/install_linux/data/front.html) for details.

OBTAINING THE OES FOR LINUX INSTALLATION SOFTWARE

You can obtain the beta software from the OES Beta site (http://www.novell.com/beta/auth/select_beta.jsp). The following ISO image files are provided for this beta release:

oes-linux-1-install.iso

oes-linux-2.iso

oes-linux-3.iso - Optional

oes-linux-4-services.iso

oes-linux-5-sles9-2.iso

oes-linux-6-sles9-3.iso

oes-linux-7-sles9-4.iso

oes-linux-8-sles9-5.iso - Optional

oes-linux-9-sles9-6.iso - Optional

oes-nsure-idm2-bundle.iso - Optional

You may not need to download all these image files, depending on what installation option you choose. See the *OES for Linux Installation Guide* (http://www.novell.com/documentation/oes/install_linux/data/front.html) for information on the different installation options and the image files that are needed.

PREPARING THE OES FOR LINUX FILES FOR INSTALLATION

There are two methods for installing OES with SLES 9 SP1: you can do a network install or a CD install. Both methods require that you download the ISO image files for each CD used in the installation.

For complete instructions, see the *OES for Linux Installation Guide* (http://www.novell.com/documentation/oes/install_linux/data/front.html).

INSTALLING OES FOR LINUX AND SUSE SLES 9 FOR X86 SP1 ON A CLEAN BOX

Insert the Open Enterprise Server CD1 in the CD-ROM drive of the computer you want to be your Linux server and boot the machine.

For a network installation, do the following:

1. From the CD boot menu, move the cursor to the second option (Installation), but do not press Enter.
2. Press F3 and select the appropriate network installation type (NFS, FTP, etc.).

3 Enter the required information (server name and installation path).

4 Press Enter to begin the installation.

5 Follow the prompts to complete the installation.

For a CD installation, do the following:

1 From the CD boot menu, move the cursor to the second option (Installation) and press Enter.

2 Follow the prompts to complete the installation.

IMPORTANT: Ignore the right-hand panel of the installation screen. The CD labels do not coincide with the information in the right-hand panel. Follow the instructions in the pop-up prompts.

There are several important things you must do as you proceed through the installation for it to finish correctly. Please read carefully the issues in the "OES for Linux Installation" section of the OES Readme file.

Also, follow carefully the important items listed in Chapters 2 and 3 of the *OES for Linux Installation Guide* (http://www.novell.com/documentation/oes/install_linux/data/front.html). There are important installation and configuration settings listed in these chapters.

WHAT TO DO AFTER INSTALLING OES FOR LINUX

To verify that the installation was successful, enter the IP address, DNS name, or local hostname of the server in your browser. The OES for Linux Welcome screen should appear.

Depending on the products you have installed, certain post-installation tasks must be completed before the individual service components can be used. See the documentation for your selected service for additional setup instructions and post-install configuration information.

Installing OES for NetWare

The basic steps for installing OES for NetWare on a new server are outlined below. For complete instructions, see the *OES for NetWare Installation Guide* (http://www.novell.com/documentation/oes/install-nw/data/hz8pck9v.html).

MEETING THE INSTALLATION REQUIREMENTS

Prior to installing OES for NetWare, ensure that your system meets the following requirements.

NOTE: Some OES NetWare installation options (patterned deployments) have specific processor and RAM requirements. See the *OES for NetWare Installation Guide* for individual pattern requirements.

System Component	Minimum Requirements	Recommended Requirements
Computer	Server-class PC with a Pentium* II or AMD* K7 450 MHz processor	Server-class PC with Pentium III, Pentium III Xeon*, Pentium 4, or Intel* Xeon 700 MHz or higher processor
Memory	512 MB of RAM	1 GB of RAM
Display	Super VGA display adapter	VESA 1.2-compliant, high-resolution display adapter
Boot partition	DOS partition of at least 200 MB and 200 MB of available space	DOS partition with 1 GB of available space
NetWare partition	1 GB of available, unpartitioned disk space outside the DOS boot partition for volume sys:	1 GB of available, unpartitioned disk space outside the DOS boot partition for volume sys:
Network hardware	One network board	One or more network boards
CD-ROM	Bootable CD drive that supports the El Torrito specification	Bootable CD drive that supports the El Torrito specification
Mouse	None required	USB, PS/2*, or serial mouse

OBTAINING THE OES FOR NETWARE INSTALLATION SOFTWARE

NetWare 6.5 SP3 is the base NetWare operating system platform for OES. To install OES for NetWare, you use the NetWare 6.5 SP3 CD set. You can obtain the NetWare 6.5 SP3 installation software from several sources.

If you purchase Novell Open Enterprise Server from a reseller, the full product package includes the following NetWare 6.5 CDs (subject to change during the OES beta period):

- *NetWare 6.5 CD 1 (Operating System)*
- *NetWare 6.5 CD 2 (Products)*
- *NetWare 6.5 License/Cryptography* diskette
- *NetWare 6.5 Partner* CD
- *Novell Identity Manager* CD
- *Novell Nterprise Branch Office* CD
- *Novell Clients Software* CD

NOTE: Some of the products and services bundled with OES require their own licenses. See the administration guides for these products for additional licensing information.

Novell provides an "overlay" installation method so you can install the operating system and apply the SP3 fixes at the same time. Before proceeding, you should download the overlay images for *NetWare 6.5 CD 1 (Operating System)* and *NetWare 6.5 CD 2 (Products)* from the Novell Beta Program Web site (http://www.novell.com/beta/auth/select_beta.jsp). Follow the instructions included with the downloads to create your own CDs to use during the installation.

The installation steps outlined below assume that you are doing a CD-based installation of OES for NetWare 6.5 SP3 on a new machine.

PREPARING THE NETWORK

If you are installing the first OES server into an existing network running any version of NDS or eDirectory prior to eDirectory 8.6, complete the following steps.

1. Run NetWare Deployment Manager (nwdeploy.exe or nwdeploynobrowser.exe for the nonbrowser version), located on the *NetWare 6.5 SP3 CD 1 (Operating System)*.
2. Complete all relevant tasks in the Network Preparation section.

STARTING THE INSTALLATION PROGRAM

1. Do one of the following:
    - Insert *NetWare 6.5 SP3 CD 1 (Operating System)* into the computer and boot the computer.
    - Boot the computer from the DOS partition, access the *NetWare 6.5 SP3 CD 1 (Operating System)*, then enter `install`.

      Make sure that the config.sys file contains the FILES=50 and BUFFERS=30 commands.

INSTALL THE SERVER SOFTWARE

1. Select the language for the Install program, along with the regional settings for the server.

2. Accept the license agreements.

3. Select a Default or Manual installation.

    - Default: Automatically detects drivers and installs the NetWare 6.5 server with default settings. The settings include the following: 4 GB volume sys:; LAN and disk drivers auto-discovered and loaded; Video mode: SVGA Plug N Play; Mouse: auto-discovered and loaded.

    - Manual: Lets you choose specific configuration options for your networking environment and change any of the default settings.

4. (Conditional) If you select a Manual installation, you must prepare the boot partition.

5. When prompted, select Open Enterprise Server as the type of installation you require.

    Selecting this option causes the installation program to display the appropriate list of products for OES, including updated versions of iManager, Virtual Office, and the QuickFinder Server.

6. Select a server pattern for your installation.

    The following table lists the available server patterns and provides a brief description of each.

Server Pattern	**Description**
Customized NetWare Server	Lets you select the optional products you want on the server.
Basic NetWare File Server	Installs only basic NetWare with no additional products.
Pre-Migration Server	Creates a server that data will be migrated to at a later time using the Netware Migration Wizard.
DNS/DHCP Server	Sets up the Novell eDirectory tree for directory-enabled DNS/DHCP services.
exteNd™ J2EE Web Application Server	Installs an optimized configuration of the Novell exteNd Application Server.
LDAP Server	Installs Lightweight Directory Access Protocol (LDAP) Services for Novell eDirectory.
NetWare AMP (Apache, MySQL, PHP, and Perl) Server	Lets you host open source Web database applications on a NetWare 6.5 server.
NetWare Backup Server	Installs the infrastructure for backup and restore services on the NetWare platform.

Server Pattern	Description
QuickFinder Server	Installs the products necessary for a QuickFinder Web search server.
Network Attached Storage (NAS) Server	Installs multiple-file protocol storage for your network.
Novell iPrint Server	Installs the Novell recommended print solution
Nterprise™ Branch Office™ - Central Office Server	Installs the basic NetWare server plus files necessary to run Rsync at a central office.
Apache/Tomcat Server	Installs Apache Web Server and the Jakarta-Tomcat Servlet Container for use in hosting dynamic, application-driven Web sites.
Novell Nsure™ Audit Starter Pack Server	Installs the centralized auditing service that is built into OES NetWare.
iSCSI SAN Storage Server	Turns your OES NetWare server into an iSCSI Storage Server (also known as an iSCSI Target).
Novell iFolder Storage Server	Installs a dedicated iFolder server.
Management Server	Installs Novell iManager 2.5 and Novell ConsoleOne® 1.3.6 network administration software to provide a complete management solution for your server environment.
Virtual Office Server	Installs Virtual Office 1.5, which provides a collaboration solution that addresses the need for users to be self sufficient with their IT needs.

7 Follow the onscreen prompts to insert the *NetWare 6.5 SP3 CD 2 (Products)* and supply the required server configuration information.

Depending on the type of server you chose to install, this information might include the following:

- Server name
- Networking protocol information (for TCP/IP, IPX™, or both)
- Domain Name Service (DNS) information
- Server time zone
- Novell eDirectory information (tree and context)
- NetWare server license
- NMAS™ Login method

8 Complete the server installation by rebooting the server when prompted.

- The NetWare 6.5 default setting is to load the server on reboot. Unless you changed this default setting, the server will load automatically.
- To load the server manually, change to the startup directory containing the NetWare server files (c:\nwserver) and then enter **`server`**.

WHAT TO DO AFTER INSTALLING OES FOR NETWARE

To verify that the installation was successful, open a browser on a workstation with access to the new OES NetWare server and enter the IP address or DNS name of the server in the browser. The OES NetWare Welcome screen should appear.

Depending on the products you have installed, you might need to configure your selected products and services to work in the new environment. Additionally, some products such as Novell Cluster Services™ for NetWare can be set up only after completing the server installation.

See the documentation for your selected service for additional setup instructions and post-install configuration information.

Accessing Administration Utilities

OES includes several administration utilities that let you manage everything in your network, from configuring and managing eDirectory to setting up network services and open source software. This section lists some of the most common utilities that you might need to access. Note that some of the utilities are for managing only OES NetWare or Linux servers.

NOVELL IMANAGER

Novell iManager is a cross-platform, Web-based administration console that provides secure, customized access to network administration utilities and content from virtually anywhere you have access to the Internet and a Web browser. It provides all the functionality of its predecessor, ConsoleOne, and serves assingle point of administration for eDirectory objects, schema, partitions and replicas, and other network resources.

iManager enables you to manage many other Novell products using iManager plug-ins and provides Role-Based Services (RBS) for delegated administration.

To access a server-based installation of iManager, open a Web browser and enter:

http://*server_ip_address*/nps/iManager.html

New in iManager 2.5 is Mobile iManager software, which allows you to install and run iManager locally on a Linux or Windows workstation. See the *Novell iManager 2.5 Installation Guide* (http://www.novell.com/documentation/imanager25/index.html) for instructions on running Mobile iManager.

NOVELL REMOTE MANAGER

Novell Remote Manager is a cross-platform, Web-based application for managing OES servers from a remote location. You can use Novell Remote Manager to monitor your server's health, change the configuration of your server, or perform diagnostic and debugging tasks.

Novell Remote Manager for NetWare (portal.nlm) provides all the functionality of Monitor, along with some functionality of other utilities available at the server console.

To access Novell Remote Manager, open a Web browser and enter:

https://*server_ip_address*:8009

HEALTH MONITORING SERVICES

Health Monitoring Services is a framework provided in OES that lets you monitor the health of Linux or NetWare servers using a Common Information Model provided by the Web-Based Enterprise Management (WBEM). WBEM is a set of management and Internet standard technologies developed to unify the management of enterprise computing environments. The ultimate objective of WBEM is to provide customers with the ability to manage all systems, regardless of their instrumentation type, using a common standard.

Health Monitoring is available in OES as an iManager plug-in. In iManager, click Servers > Monitor Servers in the left navigation frame.

You can also access Health Monitoring from Novell Remote Manager under Diagnose Server > Health Monitor.

YAST (LINUX ONLY)

In SLES 9, YaST is a system assistant that guides you through both the installation and the configuration of the server, providing a graphical interface to configure system components (hardware), network access, and security settings and administration of users.

To access YaST, start the YaST Control Center from the SUSE menu (SystemYaST).

CONSOLEONE (NETWARE ONLY)

ConsoleOne is a Java-based application for managing NetWare servers and their resources, including the eDirectory tree and eDirectory objects.

To access ConsoleOne at a workstation, map a drive to the server and run consoleone.exe from sys:\public\mgmt\consoleone\1.2\bin.

To access ConsoleOne at the NetWare server console, click the Novell menu and select ConsoleOne from the list of options.

RCONSOLEJ (NETWARE ONLY)

RConsoleJ is a Java-based application for accessing NetWare servers remotely and running server utilities from a workstation.

To access RConsoleJ at a workstation, load rconag6.nlm at the server, then map a drive to the server and run rconj.exe from sys:\public\mgmt\consoleone\1.2.

INTERNETWORKING CONFIGURATION UTILITY (NETWARE ONLY)

Internetworking Configuration (inetcfg) is a NetWare server console application used to manage network and server TCP/IP communications, manage IP addresses, and bind boards on a NetWare server.

To access this utility, load inetcfg.nlm at the System Console prompt, access the server console, then toggle to the screen.

NSS MANAGEMENT UTILITY (NETWARE ONLY)

NSS Management Utility (nssmu) is a NetWare server console application used to manage the Novell Storage System (NSS) logical file system on a NetWare server.

To access this utility, load nssmu.nlm at the System Console prompt, access the server console, then toggle to the screen.

APACHE MANAGER

Apache Manager is a Web-based application for configuring Apache Web servers. It provides a graphical interface to most of the Apache directives, making it easier to quickly (and more accurately) configure and manage Apache's behavior and performance.

Apache Manager also lets you manage multiple installations of Apache in your network, regardless of what platforms they are running on.

To access Apache Manager, open a Web browser and enter:

http://*server_ip_address*:2200

In the left frame of the Welcome Web site home page, click the plus sign (+) icon next to Open Source, then click Apache 2.0. Click either Administer Single Apache Server or Administer Multiple Apache Servers, as applicable.

OPENSSH

OpenSSH is an open source technology that allows authorized users to run commands on remote servers using methods that provide secure access and transmission of data. Through this secure shell, users can copy files and directories to and from other servers using SSH utilities, which replace traditional, nonsecure utilities such as telnet, rlogin, rsh, rcp, and ftp.

OpenSSH is installed by default on SLES 9 servers. On OES NetWare servers, load sshd.nlm at the server console.

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